DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 99.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-016335
Date Inspected: 22-Aug-2010

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC)

OSM Arrival Time: 700
OSM Departure Time: 1900
Location: Shanghai, China

CWI Name: N/A

Inspected CWI report:	☐ Yes	☐ No	☑ N/A	**CWI Present:**	☑ Yes	☐ No		
Electrode to specification:	☐ Yes	☐ No	☑ N/A	**Rod Oven in Use:**	☐ Yes	☐ No	☑ N/A	
Qualified Welders:	☐ Yes	☐ No	☑ N/A	**Weld Procedures Followed:**	☐ Yes	☐ No	☑ N/A	
Approved Drawings:	☐ Yes	☐ No	☑ N/A	**Verified Joint Fit-up:**	☐ Yes	☐ No	☑ N/A	
				Approved WPS:	☐ Yes	☐ No	☑ N/A	
				Delayed / Cancelled:	☐ Yes	☐ No	☑ N/A	

Bridge No: 34-0006
Component: OBG Trial Assembly

Summary of Items Observed:

On this date Caltrans OSM Quality Assurance (QA) Inspector Mr. S. Manjunath Math was present during the time noted above for observations relative to the work being performed.

This QA Inspector randomly observed the following work in progress:

Orthotropic Box Girder (OBG) at Trial Assembly Areas

Segment 9AW to 9BW (Transverse Splice T-Ribs)

This QA Inspector witnessed final bolt tension verification on bolts connecting T-Rib to T-Rib for Transverse Splice at Side Panel Cross Beam Side (from work point W6 towards W4), Bottom Panel (from work point W4 towards W3) and Counter Weight side (from work point W3 to W1) between Panel Point (PP) 73 to PP 74 for Segment 9AW to 9BW. Inspected the bolt tensioning on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 00459 Dated August 22, 2010.

The bolt sizes used were M22 x 65 RC Lot # DHGM220105 and the final torque value established was 380 N-m.

The bolt sizes used were M22 x 70 RC Lot # DHGM220009 and the final torque value established was 447 N-m.

The Manual Torque wrench used was Serial No. XO2-779. Please reference the pictures attached for more comprehensive details.

Segment 9AW to 9BW (Transverse Splice T-Ribs)

This QA Inspector performed Dimension Control Inspection on the Transverse Splice T-Ribs to T-Ribs after bolting for the Segment 9AW to Segment 9BW between Panel Point (PP) 73 to PP 74 at the following locations:

Work Point W6 towards Work Point W4 (Side Panel Cross Beam Side) total 19 T-Ribs.

Work Point W4 towards Work Point W3 (Bottom Panel) total 18 T-Ribs.

Work Point W3 towards Work Point W1 (Side Panel Counter Weight Side) total 19 T-Ribs.

The QA Inspector measured the Vertical Offset using 1(One) Meter Straight Edge and measured the Horizontal Offset on the web using a Bridge Cam gauge.

The measurements were recorded in the Dimension Control Plan (DCP) on a separate form and submitted to the Lead Inspector and Engineer for review and disposition.

Segment 10BE

This QA Inspector witnessed the final bolt tension verification on bolts connecting the T-Ribs Clips to Floor Beam at Side Panel (Cross Beam and Bike Path side) and at Bottom Panel at the Panel Points (PP) 89, PP 90 and PP 91 for Segment 10BE. The QA Inspector verified the bolt tension on a random basis and the results appeared to be in general compliance. The Inspection was performed against Notification No. 00460 dated August 22, 2010.

The bolt sizes used were M16 x 45 RC Lot # DHGM160008 and the final torque value established was 200 N-m.

The bolt sizes used were M16 x 65 RC Lot # DHGM160006 and the final torque value established was 180 N-m.

The Manual Torque wrench used was Serial No. XO2-114.

Segment 9EW to Segment 10AW (Skin Flatness)

This QA Inspector performed Joint Inspection along with ABF QA Inspector to check the Skin Flatness between Segment 9EW to Segment 10AW between Panel Points (PP) 85 and PP 86 at the following locations:

The skin flatness was measured on North side (Cross Beam side at B1 and B2 location) and South side (Bike Path side at B3 and B4 location) at 100mm from the weld connecting Bottom Panel to Side Panel using 5000mm string line to verify overall flatness. Straight Edges of 600mm and 630 mm of length was also used to measure the localized flatness.

The skin flatness was measured on North side (Cross Beam side at T1 location) and South side (Bike Path side at T2 location) at 100mm from the weld connecting Deck Panel to Edge Panel using 5000mm string line to verify overall flatness. The Straight Edge of 600mm and 630 mm length was also used to measure the localized flatness.

The measurements were recorded in the Dimension Control Plan (DCP) on a separate form and submitted to the Lead Inspector and Engineer for review and disposition.

Segment 9EW to Segment 10AW (Skin Flatness)

This QA Inspector performed Joint Inspection along with ABF QA Inspector to check the Skin Flatness between Segment 9EW to Segment 10AW between Panel Points (PP) 85 and PP 86 at the following location after repairing the
out of tolerance area:

The skin flatness was measured on South side (Counter Weight Side at T1 location). The Straight Edge of 630 mm length was also used to measure the localized flatness.

The measurements were recorded in the Dimension Control Plan (DCP) on a separate form and submitted to the Lead Inspector and Engineer for review and disposition.

Segment 9CW to Segment 9DW (Skin Flatness)

This QA Inspector performed Joint Inspection along with ABF QA Inspector to check the Skin Flatness between Segment 9CW to Segment 9DW between Panel Points (PP) 79 and PP 80 at the following location after repairing the out of tolerance area:

The skin flatness was measured on South side (Cross Beam side at B3 location) at 100mm from the weld connecting Bottom Panel to Side Panel using 5000mm string line to verify overall flatness. Straight Edges of 600mm and 630 mm of length was also used to measure the localized flatness.

The measurements were recorded in the Dimension Control Plan (DCP) on a separate form and submitted to the Lead Inspector and Engineer for review and disposition.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

Summary of Conversations:

No relevant conversations were reported on this date.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang 150000422372, who represents the Office of Structural Materials for your project.

Inspected By:	Math,Manjunath	Quality Assurance Inspector
Reviewed By:	Peterson,Art	QA Reviewer